

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

Sundry Notices and Reports on Wells

1. Type of Well

GAS

2. Name of Operator

MERIDIAN OIL

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

940'FSL, 650'FEL, Sec.28, T-26-N, R-~~8~~-W, NMPM

6

5. Lease Number

SF-079266

6. If Indian, All. or Tribe Name

7. Unit Agreement Name

8. Well Name & Number

Vaughn #1541

9. API Well No.

30-039-23822

10. Field and Pool

Blanco MV/Basin DK/
WC;Ensenada Mesa Gal

11. County and State

Rio Arriba Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE

Type of Submission

- ☒ Notice of Intent
- ☐ Subsequent Report
- ☐ Final Abandonment

- ☒ A
- ☒ R
- ☐ Pl
- ☐ Ca
- ☐ Alt
- ☐ Oth

T, OTHER DATA

- ☐ e of Plans
- ☐ onstruction
- ☐ utine Fracturing
- ☐ Shut off
- ☐ ion to Injection

13. Describe Proposed or Completed Operations

It is intended to workover the subject wellbore according to the attached procedure, pertinent data sheet, and wellbore diagram. The Dakota will be temporarily abandoned, the Gallup and the Mesaverde will be recompleted and commingled after an extended flow period per the blanket downhole commingle order R-10239 dated November 14, 1994. This work will occur in the 1995 calendar year. A non-standard location exception is being applied for from the New Mexico Oil Conservation Division.

RECEIVED
DEC 19 1994

OIL CON. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct.

Signed [Signature] (TEM3) Title Regulatory Affairs Date 12/7/94

(This space for Federal or State Office use)

APPROVED BY _____ Title _____ Date _____

CONDITION OF APPROVAL, if any:

APPROVED

DEC 18 1994

DISTRICT MANAGER

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

HOLD C-104 10/11/94 BY 10-1-1
Well No. 104 @

Form C-10
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-039-23822	72319/96321/71599	Blanco Mesaverde/Ensenada Mesa Cal/Basin Dakota
Property Code	Property Name	Well Number
7227	VAUGHN	15A
OGRID No.	Operator Name	Elevation
14538	MERIDIAN OIL INC.	6262'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County
P	28	26-N	6-W		940	SOUTH	650	EAST	R.A.

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
E/320-E/320-40			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

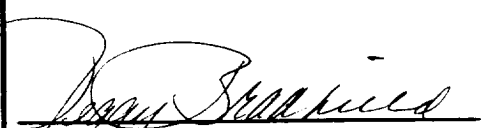
16* Not resurveyed,
prepared from a plat by
Fred B. Kerr Jr. Dated
August 21, 1980

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OIL CON. DIV.
DIST. 3

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17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.


Signature
Peggy Bradfield
Printed Name
Regulatory Affairs
Title
12-12-94
Date

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11-30-94
Date of Survey
Signature and Seal of Professional Surveyor:


Certificate Number

3.815

Vaughn # 15E

T26NR06W28P

Mesaverde, Gallup, &
Dakota Workover

GL @ 6262'

Current

GL @ 6262'

Proposed

12-1/4" Hole
9-5/8" Casing @ 224'
w/ 200 sxs to Surface

12-1/4" Hole
9-5/8" Casing @ 224'
w/ 200 sxs to Surface

TOC @ 1800'
Temp Survey

TOC @ 1800'
Temp Survey

Nacimiento Top @ 253'
Ojo Alamo Top @ 1880'
Kirtland Top @ 1980'
Fruitland Top @ 2234'
Pictured Cliffs @ 2468'
Lewis Top @ 2600'
Chacra Top @ 3330'
Cliff House @ 4125'
Menefee @ 4160'
Point Lookout @ 4710'
Mancos @ 5000'
Niobrara @ 5670'
Juana Lopez @ 6320'
Greenhorn @ 6632'
Graneros @ 6689'
Two Wells @ 6746'
Paguate @ 6794'
Cubero @ 6863'
Oak Canyon @ 6926'
Encinal Canyon @ 6939'
Burro Canyon @ 6990'
Morrison @ 7062'

Stage Tool @
2673'
w/ 311 sxs

2-3/8"
Tubing
@ 7050'

Stage Tool @
2673'
w/ 311 sxs

Mesaverde
Perforations
35 Holes
4733' to 5092'

Stage Tool @
5334'
w/ 500 sxs

Stage Tool @
5334'
w/ 500 sxs

Dakota
Perforations
25 Holes
6835' to 7012'

Gallup
Perforations
15 Holes
5875' to 6094'

Dakota
Perforations
25 Holes
6835' to 7012'

8-3/4" & 7-7/8" Hole
4-1/2" Casing @ 7109'
w/ 430 sxs

PBTD @ 7096'
TD @ 7109'

8-3/4" & 7-7/8" Hole
4-1/2" Casing @ 7109'
w/ 430 sxs

PBTD @ 7096'
TD @ 7109'

This well will be commingled in the Mesaverde, Gallup and Dakota. An allocation Formula will be finalized after a 3 month online sales testing period. MOI will work with the NMOCD in developing this allocation formula. Prior to commingle, the Gallup & Dakota will be Temporarily Abandoned under a cast iron bridge plug, while the Mesaverde will be produced separately to help determine commingled production.

Meridian Oil Inc.
11/07/94

Pertinent Data Sheet - Vaughn #15E

Location: Unit P, Section 28, T26N, R06W
940' FSL, 650' FEL

Rio Arriba County, New Mexico

Field: Basin Dakota

Elevations: 6262' GL **TD:** 7109'
' KB **PBTD:** 7096'

Completed: 11-11-85
Spud: 10-7-85

DP #: 54306A
GW1: 100.00 %
NRI: 68.250 %

Casing Record:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt & Grade</u>	<u>Depth Set</u>	<u>Sxs Cement</u>	<u>TOC</u>	
12-1/4"	9-5/8"	32.3# J-55	224'	200 sxs	236 ft3 surf	Marker Joint @ 6627'
8-3/4" to	4-1/2"	10.5# J-55	7109'	#1 430sxs	660ft3	stage @ 5334'
7-7/8"	4-1/2"	11.6# K-55		#2 500sxs	814ft3	stage @ 2673' TOC @
@ 4898'				#3 311sxs	504ft3	float @ 7101' 1800' ts

Tubing & Rod Record:

<u>Tubing Size:</u>	<u>Wt & Grade</u>	<u>Depth Set</u>	
2-3/8"	4.7# J-55	7004'	SN @ 6972' 217 jts

Formation Tops:

Surface:	San Jose		ISICP =	1950 psi
Nacimiento:	253'	Niobrara:	5670'	Last SITP =
Ojo Alamo:	1880'	Juana Lopez:	6320'	Initial 3-hr =
Kirtland:	1980'	Greenhorn:	6632'	Initial AOF =
Fruitland:	2234'	Graneros:	6689'	Cum Gas =
Pictured Cliffs:	2468'	Two Wells:	6746'	Cum Oil =
Lewis:	2600'	Pagaute:	6794'	Current Rate =
Chacra:	3330'	Cubero:	6863'	
Cliff House:	4125'	Oak Canyon:	6926'	Oil Transp: Meridian Oil
Menefee:	4160'	Encinal Canyon:	6939'	Gas Transp: El Paso Natural Gas
Point Lookout:	4710'	Burro Canyon:	6990'	Line Press = 80-120 psi
Mancos:	5000'	Morrison:	7062'	

Logging Record: Comp. Analyzed log system: Correlation-GR-L; Ind. Log; Comp. Density Dual Spaced

Stimulation: Perforated Dakota as follows with 25 (0.34") total holes @ 6835', 6839', 6843', 6847', 6851', 6855', 6870', 6879', 6884', 6889', 6907', 6912', 6917', 6922', 6943', 6964', 6969', 6974', 6979', 6984', 6989', 6994', 6999', 7004', 7012'. Frac well w/127.094 gals of slickwater & 114,500# 40/60 sand @ 33 BPM w/50 balls dropped in 1 set. ATP 3600 psi. ISIP 2200.

Workover History:

None

Vaughn # 15E
Blanco Mesaverde/Undesignated Gallup/Basin Dakota Workover
UnitP-Sec28-T26N-R06W

Prior to Moving on Workover Rig, Inspect Location, Verify All Appropriate Equipment is on Hand. Dig work pit for water/cement recovery/flare pit, fence pits. Comply with all BLM, NMOCD, & MOI rules & regulations. **Always Hold Safety Meetings.**

-
- Ensure all approvals for Commingle work necessary have been approved.
 - Utilize EPNG Drill Gas.
 - Spot Ten (10) Tanks & Fill (9)-400 bbl tanks with risers to pre-gel. Pre-Gel 2 tanks.
 - Use Only True 2% KCl water, (or substitute) Filter Frac & Acid water to 1 microns.
 - Fifty(50) joints 2-3/8" 4.7# EUE J-55 tubing on location.
 - Six (6) 3-1/8" Drill Collars on location.
 - Will utilize trucked Nitrogen after initial work in place of drill gas.
 - 900 series BOP, 7" blooie line, manifold, & 1/4", 1/2", & 3/4" chokes as appropriate.
 - 2-7/8" N-80 Buttress Frac String (7000' +/- required).
-

1. Move In workover rig. Record and report SI pressures on tubing, casing, & bradenhead. Lay blowdown line. Blow down casing & tubing. Pump 20 bbls 2% KCl down tubing. ND WH, NU BOP & stripping head. Test all equipment!
2. TOOH, rabbit, & strap 217 jts of 2-3/8" tubing (from 7004', SN @ 6972'). Flow well out blooie line. Visually inspect tubing, note any scale in tubing. Lay down bottom 500' of this pipe.
3. PU 3-7/8" bit, float, 3-1/8" Drill Collars & 2-3/8" 4.7# J-55 EUE workstring. Rabbit & Strap pipe in the hole. RU powerswivel. Drill & Clean out with Gas & Foam sweeps to PBTD 7096'. Note Drilling Mud in returns if any. Once cleaned up. TOOH with bit & collars. Drill gas rate maximum of 600 MCFD (due to low line pressure).
4. PU 4-1/2" CIBP (Use of CIBP will facilitate use of a cement retainer should one be required.) & 4-1/2" Packer Combination on 2-3/8". TIH & set CIBP @ 6600', T&A Dakota. Roll hole & fill from bottom with filtered 2% KCl water, Set PKR above CIBP & Test CIBP & tubing to 3500 psi. Hold for 10 minutes. Release PKR, close pipe rams, & Pressure test entire casing string to 500 psi for 10 minutes. If PT does not hold Pull above DV tool @ 5334' and 2673' & test below each to 1200 psi. TOOH.
5. RU wireline. Run GR-CCL-CBL from 6600' to surface. No gaps. Run with 500-1000 psi over entire interval hole. Note and report all cement tops and quality of bond over both Gallup & Mesaverde Interval. **RU Schlumberger to Run CASED HOLE DIPOLE SONIC LOG across Gallup interval from 5800' to 6600' and Mesaverde interval from 4600' to 5300'.** Actual Perforations will be verified by Engineering prior to shooting!!
6. Test casing from surface to 1200 psi via BOP. Hold and record for 15 minutes on chart. If casing integrity is not sound, identify leaks, & Engineering will recommend squeeze procedure & modify stimulation work.
7. Complete all squeeze cementing operations which will be determined based upon pressure test information and bond quality. WOC recommended time plus 2 hours. Drill out Cement. Pressure test to 1200 psi. Spot 500 gallons 10% HCl acid with (2 gal/1000 inhibitor, 2 gal/1000 iron sequestering agent, 1 gal/1000 non-emulsifier) across Gallup @ 6070'. TOOH, standing 2-3/8" back. Change rams to 2-7/8"

Vaughn # 15E
Meridian Oil Inc.
11/08/94

17. Flow well back through choke manifold limiting fluid production to 20 BLPH. When possible, Release PKR & TOOH laying down 2-7/8" N-80. If necessary set plug in 1.81" profile nipple. Change out rams. TIH w/ 3-7/8" bit, collars, & float, on 2-3/8" and clean well out to CIBP @ 5200' with gas. Stage in hole as required. Clean well up until returns will not interfere with drilling of CIBP. Obtain MV pitot gauge. Drill CIBP. Push to bottom @ 6600' +/- . Clean up entire well until returns are less than 6 BPH. TOOH with bit & collars. Obtain MV/GP production gauge.
18. RU wireline. Run AFTER FRAC GAMMA RAY and Temperature log in combination with well flaring out blooie line. Log temperature in hole. Note fluid level if present. Run & Set CIBP @ 5800'+/- covering/T&A Gallup zone. RD wireline.
19. Prepare to run production tubing string as follows for Mesaverde: expendable check, one joint 2-3/8" tubing, 'F' nipple, and remaining tubing. Land tubing @ 5150'. ND BOP, NU WH. Pump off expendable check and flow well up tubing obtain Mesaverde production gauge. RD & Release Rig to next location.
20. Operations will remanifold wellhead, and produce well for 180 days into EPNG pipeline. Notify Governmental agencies that Mesaverde ONLY production will occur until further notice, GP & DK Temporarily abandoned. At end of test Run pressure bomb in SN and SI well. Leave well SI 7 days. Pull Bomb, and return Mesaverde to production until workover rig returns.
21. Move In, RU workover rig. Lay all lines and manifolds. RU drill Gas unit. Record flowing casing & tubing pressures. Blow casing and tubing down. Kill tubing with 20 bbls 2% KCl water. ND WH, NU BOP. TOOH with 2-3/8". RU power swivel. TIH w/ 3-7/8" bit, 4-3-1/8" drill collars & drill CIBP @ 5800'+/- clean well out with Gas. Drill CIBP @ 6600' & push plugs to PBTD. TOOH & LD bit & collars.
22. TIH with final production tubing string for commingled production as follows: expendable check, one joint 2-3/8", F nipple, and remaining 2-3/8" tubing. Land tubing @ 7050'. ND BOP, NU WH. Pump off check w/ water & Gas. Flow well up tubing verifying check pumped. RD release rig to next location.
23. Notify Marketing & government agencies that commingled production from all horizons MV, GP, & DK will occur in order to finalize allocation formula. At end of 90 days, the allocation formula will be submitted to NMOCD for approval, production will commence prior to actual allocation approval.

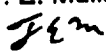
Approved:


Drilling Superintendent

TEM

Recommended Vendors:

Stimulation(Acid,Fracturing,Nitrogen)
Radioactive Tagging
Cased Hole Services (Perforating, Logging)
Cased Hole Dipole Sonic Log
Frac String (2-7/8")
Bridge Plugs, Packers, WAPP tool
Engineering

Western Company	327-6222
Protechnics, Intl	326-7133
Petro Wireline	326-6669
Schlumberger	325-5006
Cave Enterprises	325-3401
Schlumberger	325-5006
T. E. Mullins	326-9546-W
	327-8692-pager

8. Perforate Gallup Interval with 3-1/8" HSC gun select fire 180 degree phasing 1 SPF JRC C-3130234 charges 10.5 gram 0.30" holes (0.30" is the Maximum Hole Size Preferred) Top-down as follows: (15 holes). Engineering may modify perforations based upon bond character.

5875' 5885' 5894' 5918' 5932' 5963' 5973' 5987' 6005' 6029'
6042' 6058' 6070' 6079' 6094' (15 total holes, 219' of interval)

9. PU PKR, 1.81" profile nipple, 2 joints 2-3/8" 4.7# N-80 tubing, 2-3/8" x 2-7/8" buttress changeover, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. TIH below bottom perforation and test tubing, & frac string to 3500 psi on good bonded pipe. Pull uphole & set PKR 100' above top Gallup perforation. Hold 500 psi on annulus during acid job. Pump 1500 gallons 10% HCl acid with (2 gal/1000 inhibitor, 2 gal/1000 iron sequestering agent, 1 gal/1000 non-emulsifier) and drop 30 - 7/8" 1.3 Specific Gravity ball sealers. Ball off to 3500 psi. Release pressure displace acid. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR.

10. RU stimulation company. Install 10,000 psi working pressure full opening surface valve. Hold 500 psi on annulus. Hydraulically stimulate Gallup interval with 70,000# 20/40 resin coated proppant at 25 BPM. Maximum surface treating pressure will be 5,500 psi, not 3,500 psi due to static vs frictional pressure effects. Sand will be tagged with Ir-192 radioactive isotope.

11. Flow well back after frac on 1/4" choke until surface pressure is below 500 psi. Then flow well on open 2" line thru choke manifold. When possible ensure annulus has full column of liquid and release PKR. TOOH with 2-7/8" tubing and PKR. If necessary set plug in 1.81" profile nipple.

12. RU wireline & set CIBP @ 5200'. Change rams to 2-3/8".

13. TIH w/ PKR on 2-3/8" and test CIBP and part of casing from below DV @ 2673' to 3500 psi. Spot 500 gallons 10% HCl acid at 5050' across Mesaverde. TOOH. Change rams to 2-7/8".

14. Perforate Mesaverde Interval with 3-1/8" HSC gun select fire 180 degree phasing 1 SPF JRC C-3130234 charges 10.5 gram 0.30" holes (0.30" is the Maximum Hole Size Preferred) top down as follows: (35 holes). Engineering may modify perforations based upon bond character.

4733' 4735' 4742' 4744' 4746' 4759' 4767' 4777' 4792' 4795'
4797' 4799' 4801' 4803' 4818' 4821' 4833' 4835' 4846' 4852'
4857' 4879' 4903' 4907' 4946' 4970' 4977' 4985' 4992' 5014'
5024' 5049' 5064' 5080' 5092' (35 total holes, 359' of interval)

15. PU PKR, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. TIH below bottom perforation and test tubing, & frac string to 3500 psi on good bonded pipe. Pull uphole & set PKR 150' above top perforation. Hold 500 psi on annulus during acid job. Pump 1500 gallons 10% HCl acid with additives and drop 70 - 7/8" 1.3 Specific Gravity ball sealers. Ball off to 3500 psi. Release pressure displace acid. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR below DV tool @ 2673' on good bonded pipe.

16. RU Frac Crew. Install 10,000 psi working pressure full opening surface valve. MAXIMUM SURFACE TREATING PRESSURE WILL BE 5500 PSI not 3500 psi because of friction effects. Hold 500 psi on annulus. Stimulate Mesaverde per attached schedule w/ slickwater & surfactant (NO SAND) at 35 BPM. Dropping balls selectively. Fluid will be tagged with tracer. SI well.